

WHAT IS CLAIMED IS:

1. Hybrid maize seed designated 39W54, representative seed of said hybrid 39W54 having been deposited under ATCC accession number _____.

2. A maize plant, or its parts, produced by the seed of claim 1.

3. Pollen of the plant of claim 2.

4. An ovule of the plant of claim 2.

5. A tissue culture of regenerable cells of a hybrid maize plant 39W54, representative seed of said hybrid maize plant 39W54 having been deposited under ATCC accession number _____, wherein the tissue regenerates plants capable of expressing all the morphological and physiological characteristics of said hybrid maize plant 39W54.

6. A tissue culture according to claim 5, the cells or protoplasts being from a tissue selected from the group consisting of leaves, pollen, embryos, roots, root tips, anthers, silks, flowers, kernels, ears, cobs, husks, and stalks.

7. A maize plant, or its parts, regenerated from the tissue culture of claim 5 and capable of expressing all the morphological and physiological characteristics of hybrid maize plant 39W54, representative seed having been deposited under ATCC accession number _____.

8. The maize plant of claim 7 wherein said plant is male sterile.

9. A method for developing a maize plant in a maize plant breeding program using plant breeding techniques, which include employing a maize plant, or its parts, as a source of plant breeding material, comprising: obtaining the maize plant, or its parts, of claim 2 as a source of said breeding material.

10. The maize plant breeding program of claim 9 wherein plant breeding techniques are selected from the group consisting of: recurrent selection, backcrossing,

pedigree breeding, restriction fragment length polymorphism enhanced selection, genetic marker enhanced selection, and transformation.

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11. A maize plant, or its parts, wherein at least one ancestor of said maize plant is the maize plant, or its parts, of claim 2, said maize plant capable of expressing a combination of at least two 39W54 traits selected from the group consisting of: a relative maturity of approximately 73 based on the Comparative Relative Maturity Rating System for harvest moisture of grain, superior yield potential, above average test weight, above average stalks, and particularly suited to the Northwest, Northcentral, and Northeast regions of the United States and the Manitoba and Alberta regions of Canada.

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A hybrid maize plant according to claim 2, wherein the genetic material of said plant contains one or more transgenes.

13. A method for developing a maize plant in a maize plant breeding program using plant breeding techniques, which include employing a maize plant, or its parts, as a source of plant breeding material, comprising: obtaining the maize plant, or its parts, of claim 12 as a source of said breeding material.

14. The maize plant breeding program of claim 13 wherein plant breeding techniques are selected from the group consisting of: recurrent selection, backcrossing, pedigree breeding, restriction fragment length polymorphism enhanced selection, genetic marker enhanced selection, and transformation.

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15. A maize plant, or its parts, wherein at least one ancestor of said maize plant is the maize plant, or its parts, of claim 12, said maize plant capable of expressing a combination of at least two 39W54 traits selected from the group consisting of: a relative maturity of approximately 73 based on the Comparative Relative Maturity Rating System for harvest moisture of grain, superior yield potential, above average test weight, above average stalks, and particularly suited to the Northwest, Northcentral, and Northeast regions of the United States and the Manitoba and Alberta regions of Canada.

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16. A hybrid maize plant according to claim 2, wherein the genetic material of said plant contains one or more genes transferred by backcrossing.
17. A method for developing a maize plant in a maize plant breeding program using plant breeding techniques, which include employing a maize plant, or its parts, as a source of plant breeding material, comprising: obtaining the maize plant, or its parts, of claim 16 as a source of said breeding material.
18. ~~The maize plant breeding program of claim 17 wherein plant breeding techniques are selected from the group consisting of: recurrent selection, backcrossing, pedigree breeding, restriction fragment length polymorphism enhanced selection, genetic marker enhanced selection, and transformation.~~
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19. A maize plant, or its parts, wherein at least one ancestor of said maize plant is the maize plant, or its parts, of claim 16, said maize plant capable of expressing a combination of at least two 39W54 traits selected from the group consisting of: a relative maturity of approximately 73 based on the Comparative Relative Maturity Rating System for harvest moisture of grain, superior yield potential, above average test weight, above average stalks, and particularly suited to the Northwest, Northcentral, and Northeast regions of the United States and the Manitoba and Alberta regions of Canada.
20. A maize plant, or its parts, having all the morphological and physiological characteristics of the plant of claim 2.
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21. ~~The maize plant of claim 20 wherein said maize plant is male sterile.~~
22. A method for developing a maize plant in a maize plant breeding program using plant breeding techniques, which include employing a maize plant, or its parts, as a source of plant breeding material, comprising: obtaining the maize plant, or its parts, of claim 20 as a source of said breeding material.
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23. ~~The maize plant breeding program of claim 22 wherein plant breeding techniques are selected from the group consisting of: recurrent selection, backcrossing,~~

pedigree breeding, restriction fragment length polymorphism enhanced selection, genetic marker enhanced selection, and transformation.

24. A maize plant, or its parts, wherein at least one ancestor of said maize plant is the maize plant, or its parts, of claim 20, said maize plant capable of expressing a combination of at least two 39W54 traits selected from the group consisting of: a relative maturity of approximately 73 based on the Comparative Relative Maturity Rating System for harvest moisture of grain, superior yield potential, above average test weight, above average stalks, and particularly suited to the Northwest, Northcentral, and Northeast regions of the United States and the Manitoba and Alberta regions of Canada.

25. A hybrid maize plant according to claim 20, wherein the genetic material of said plant contains one or more transgenes.

26. A method for developing a maize plant in a maize plant breeding program using plant breeding techniques, which include employing a maize plant, or its parts, as a source of plant breeding material, comprising: obtaining the maize plant, or its parts, of claim 25 as a source of said breeding material.

27. The maize plant breeding program of claim 26 wherein plant breeding techniques are selected from the group consisting of: recurrent selection, backcrossing, pedigree breeding, restriction fragment length polymorphism enhanced selection, genetic marker enhanced selection, and transformation.

28. A maize plant, or its parts, wherein at least one ancestor of said maize plant is the maize plant, or its parts, of claim 25, said maize plant capable of expressing a combination of at least two 39W54 traits selected from the group consisting of: a relative maturity of approximately 73 based on the Comparative Relative Maturity Rating System for harvest moisture of grain, superior yield potential, above average test weight, above average stalks, and particularly suited to the Northwest, Northcentral, and Northeast regions of the United States and the Manitoba and Alberta regions of Canada.

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A hybrid maize plant according to claim 20, wherein the genetic material of said plant contains one or more genes transferred by backcrossing.

30. A method for developing a maize plant in a maize plant breeding program using plant breeding techniques, which include employing a maize plant, or its parts, as a source of plant breeding material, comprising: obtaining the maize plant, or its parts, of claim 29 as a source of said breeding material.

31. The maize plant breeding program of claim 30 wherein plant breeding techniques are selected from the group consisting of: recurrent selection, backcrossing, pedigree breeding, restriction fragment length polymorphism enhanced selection, genetic marker enhanced selection, and transformation.

32. A maize plant, or its parts, wherein at least one ancestor of said maize plant is the maize plant, or its parts, of claim 29, said maize plant capable of expressing a combination of at least two 39W54 traits selected from the group consisting of: a relative maturity of approximately 73 based on the Comparative Relative Maturity Rating System for harvest moisture of grain, superior yield potential, above average test weight, above average stalks, and particularly suited to the Northwest, Northcentral, and Northeast regions of the United States and the Manitoba and Alberta regions of Canada.